ABSTRACT OF THE DISCLOSURE

A method for producing a quartz glass material with high resistance to radiation-induced density modifications when exposed to ultraviolet radiation at about 193 nm and energy densities of the order of the working energy densities of optical systems for microlithography, in which the peroxy defect level in the quartz glass material is minimized. In this way the creation of closely neighbored hydroxyl groups can be inhibited, which have been identified as an essential cause for radiation induced density reduction of the quartz glass material.